

ABSTRACT

The invention relates to coated optical fibers comprising soft primary coatings and to such primary coatings for protecting glass optical fibers

5 having a sufficient high resistance against cavitation. In particular, the primary coatings have a cavitation strength at which a tenth cavitation appears ( $\sigma_{\text{cav}}^{10}$ ) of at least about 1.0 MPa as measured at a deformation rate of  $0.20\% \text{ min}^{-1}$  and of at least about 1.4 times their storage modulus at  $23^\circ\text{C}$ . The coating preferably shows strain hardening in a relative Mooney plot, preferably has a strain energy release

10 rate  $G_0$  of about  $20 \text{ J/m}^2$  or more, and preferably has a low volumetric thermal expansion coefficient. The invention furthermore provides a method and apparatus for measuring the cavitation strength of a primary coating.